

Glossary

Afforestation: Planting of new forests on lands that have not been recently forested.

Anaerobic lagoon: A liquid-based manure management system, characterized by waste residing in water to a depth of at least 6 feet for a period ranging between 30 and 200 days.

Associated gas: Natural gas found mixed with crude oil in underground reservoirs, released as a byproduct of oil production.

Baseline period: The years 1987 through 1990 for which entity-level emissions may be reported.

Biofuels: Organic materials, such as wood, waste, and alcohol, burned to produce energy.

Biogas: A mixture of carbon dioxide and methane produced through bacterial action.

Biomass: Materials that are biological in origin, including organic material (both living and dead) from above and below ground, e.g., trees, crops, grasses, tree litter, roots, and animals and animal waste.

British thermal unit (Btu): A common unit used in measuring energy, equal to the amount of heat needed to raise the temperature of 1 pound of water by 1°F.

Carbon sink: A reservoir that absorbs or takes up released carbon. Vegetation and soils are common carbon sinks.

Chlorofluorocarbons (CFCs): A family of inert, non-toxic, and easily liquefied chemicals used in refrigeration, air conditioning, packaging, and insulation, or as solvents or aerosol propellants. Because they are nonreactive, they drift into the upper atmosphere, where they are disassociated by solar radiation and where their components destroy ozone.

Cogeneration: The sequential use of energy to generate electricity and another form of useful thermal energy, such as heat or steam.

Commercial scale: Application of a demonstrated technology at a cost-effective scale.

Commitment: An expressed intention to undertake an action or actions that will reduce greenhouse gas emissions, increase carbon sequestration, or achieve a stated emissions goal.

Conversion factor: A unique value used to convert one unit (e.g., acres) to another appropriate unit (e.g., hectares).

Deforestation: The removal of forest stands.

Emission coefficient/factor: A unique value for scaling emissions to activity data in terms of a standard rate of emissions per unit of activity (e.g., pounds of carbon dioxide emissions per unit of fossil fuel consumed).

Emissions: Anthropogenic (human-caused) releases of greenhouse gases to the atmosphere (e.g., the release of carbon dioxide during fuel combustion).

Emissions, direct: Emissions from sources owned (wholly or in part) or leased by an entity.

Emissions, fugitive: Emissions that are released inadvertently or accidentally from a controlled or closed system, such as natural gas pipelines.

Emissions, indirect: Emissions from sources not owned or leased by an entity that occur, wholly or in part, as a result of its activities.

Emission reduction: A decrease in annual greenhouse gas emissions.

Energy conservation: Activities that reduce end-use demand for energy by reducing the service demanded.

Entity: For the purposes of the Voluntary Reporting Program, an individual or organization that is a legal U.S. person (e.g., a U.S. citizen, resident alien, company, organization, or group incorporated under or recognized by U.S. law; or a Federal, State, or local government agency).

Entity boundary: Conceptually, a line drawn to encompass the emissions sources and sinks to be evaluated in an entity-level report. An entity boundary should include all the emissions sources and sinks owned (wholly or in part) or leased by the entity and, to the extent possible, other emissions sources and sinks affected by the entity's activities.

Entity-level reporting: The reporting of greenhouse gas emissions, emission reductions, and carbon sequestration for an entire entity.

Estimation method: The techniques, including key assumptions and data sources, used by the reporter to derive the reported emissions, emission reductions, or sequestration.

Foreign activities: All actions outside the United States, its territories, and trusts.

Fossil fuel: A hydrocarbon fuel, such as petroleum, derived from living matter of a previous geologic time.

Fuel cycle: The entire set of sequential processes or stages involved in the use of fuel, including extraction, transformation, transportation, and combustion. Emissions generally occur at each stage of the fuel cycle.

Fuel switching: The substitution of one type of fuel for another. The fuel substitution may be either temporary (as in the case of a power plant that temporarily switches from coal to natural gas) or permanent (as in the case of a fleet operator who replaces gasoline-powered automobiles with electric cars).

Fugitive emissions: See Emissions, fugitive.

Global warming potential (GWP): A term that describes the concept of determining the impacts of various gases on global warming compared to that of carbon dioxide. For example, methane has a GWP 21 times that of the equivalent amount of carbon dioxide over a 100-year period.

Gob: A zone of rubble created when the roof of a coal mine collapses behind the mining operations.

Greenhouse effect: A term used to describe the roles of water vapor, carbon dioxide, and other trace gases in keeping the Earth's surface warmer than it would otherwise be. These radiatively active gases are relatively transparent to incoming shortwave radiation but are relatively opaque to outgoing long-wave radiation. The latter radiation, which would otherwise escape to space, is trapped by the gases within the lower levels of the atmosphere. The subsequent reradiation of some of the energy back to the Earth maintains surface temperatures higher than they would be if the gases were absent. There is concern that increasing concentrations of greenhouse gases, including carbon dioxide, methane, and certain man-made gases, may enhance the greenhouse effect and cause global climate change.

Greenhouse gases: Those gases, such as water vapor, carbon dioxide, tropospheric ozone, nitrous oxide, and methane, that are transparent to solar radiation but opaque to long-wave radiation, thus preventing long-wave radiation energy from leaving the atmosphere. The greenhouse gases covered by the Voluntary Reporting Program are (1) carbon dioxide (CO₂), (2) methane (CH₄), (3) nitrous oxide (N₂O), and (4) halogenated

substances. Increasing levels of greenhouse gases in the atmosphere may contribute to an increase in average global temperatures, resulting in adverse climate changes.

Halogenated substance: A volatile compound containing halogens, such as chlorine, fluorine, or bromine.

Horizon year: The year in which a commitment to reduce greenhouse gas emissions or increase sequestration (reported on Schedule IV) is expected to be met.

Intergovernmental Panel on Climate Change (IPCC): A panel established jointly in 1988 by the World Meteorological Organization and the United Nations Environment Program to assess scientific information related to climate change and to formulate realistic response strategies.

Life cycle: The progression of a product through its service life. For most products, emissions and energy-consuming characteristics will be altered as they age.

Longwall mining: A technique of underground mining in which a cutting machine is pulled back and forth along a panel of coal 300 to 1,000 feet wide and as much as 2 miles long. As the panel is cut, the broken coal is removed by a conveyor, and movable roof supports advance, allowing the roof in mined-out areas to collapse.

Manure management: The method used to dispose of the solid waste produced by livestock and poultry.

Municipal solid waste: Residential solid waste and some nonhazardous commercial, institutional, and industrial wastes.

Ozone: A molecule made up of three atoms of oxygen. In the stratosphere, ozone occurs naturally and provides a protective layer shielding the Earth from harmful ultraviolet radiation. In the troposphere, it is a chemical oxidant and major component of photochemical smog.

Photosynthesis: The manufacture of carbohydrates by plants from carbon dioxide and water in the presence of chlorophyll, with sunlight as the energy source. In this process, carbon is sequestered and oxygen is released.

Pilot project: A small-scale trial designed to test or demonstrate the efficiency or efficacy of a project.

Project: An action undertaken to reduce greenhouse gas emissions or sequester carbon.

Project boundary: Conceptually, a line drawn to encompass the emissions sources and sinks affected by a project. A project boundary should include all the significant and quantifiable effects of the project.

Project ID code: A unique code assigned by the Energy Information Administration to a reported project for tracking purposes.

Project-level reporting: Reporting on emission reductions or carbon sequestration achieved as a result of a specific action or group of actions.

Reconductoring: Replacement of existing conductors with large-diameter conductors to reduce line losses. Conductors (including feeders and transmission lines) are a major source of transmission and distribution system losses. In general, the smaller the diameter of the conductor, the greater its resistance to the flow of electric current, and the greater the consequent line losses.

Reference case: The emissions level to which current actual emissions levels are compared when emission reductions are calculated.

Reference case, basic: A reference case using actual historical emissions or sequestration values.

Reference case, modified: A reference case using projected emissions or sequestration values, representing the emissions level that would have occurred in the absence of reduction or sequestration efforts.

Reforestation: Replanting of forests on lands that have recently been harvested.

Reporter: An entity (see definition above) completing either Form EIA-1605 or Form EIA-1605EZ and submitting it to the Energy Information Administration.

Room and pillar mining: The most common method of underground coal mining, in which the mine roof is supported by coal pillars left at regular intervals.

Sequestered carbon: Carbon that is removed from the atmosphere and retained in a carbon sink (such as a growing tree) or in soil.

Sequestration: The fixation of atmospheric carbon dioxide in a carbon sink through biological or physical processes, such as photosynthesis.

Sink: See carbon sink.

Third-party reporter: An authorized party that submits a report on behalf of two or more entities which have engaged in emissions-reducing or sequestration-increasing activities. Possible third-party reporters include trade associations reporting on behalf of members that have undertaken reduction projects.

Vhar metering: Phase shifters on watthour meters that measure reactive volt ampere hours or varhours.

Watt (W): A common metric unit used in measuring power (the rate at which work is done), defined as 1 Joule per second and equivalent to 3.412 Btu per hour.